

IN THE CLAIMS:

Claims 1-19, 22, 25, and 28 have been amended as follows:

1. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a first moving average filter to determine a first average value of a first binary signal comprising only binary values of one;

a second moving average filter to determine a second average value of a second binary signal comprising only binary values of zero, wherein the second binary signal includes both positive and negative values; and

a combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output.

2. (Currently Amended) ~~The adaptive slicer threshold generation system according to claim 1~~ An adaptive slicer threshold generation system, comprising:

a first moving average filter to determine a first average value of a first binary signal;

a second moving average filter to determine a second average value of a second binary signal; and

a combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output,

wherein the adaptive slicer threshold generation system further includes a gain element to set a value of a slicer threshold within a data eye.

3. (Currently Amended) ~~The adaptive slicer threshold generation system according to claim 1~~ An adaptive slicer threshold generation system, comprising:

a first moving average filter to determine a first average value of a first binary signal;

a second moving average filter to determine a second average value of a second binary signal; and

a combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output,

wherein at least one of the first moving average filter and the second moving average filter includes a leakage element to control an adaptation rate of ~~[[the]]~~ a slicer threshold.

4. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a first moving average filter to determine a first average value of a first binary signal;

a second moving average filter to determine a second average value of a second binary signal, wherein at least one of the first moving average filter and the second moving average filter includes

a first delay element to delay a received binary signal;

a ~~second~~ first combiner to combine the received binary signal, a delayed binary signal from the first delay element, and a delayed output signal from a second delay element; and

a ~~second~~ gain element to manipulate an output signal from the ~~second~~ first combiner, wherein the second delay element delays the output signal that is combined by the ~~second~~ first combiner with the received binary signal and the delayed binary signal; and

a second combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output.

5. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a minimum detector to determine a minimum value of a binary one;

a peak detector to determine a maximum value of a binary zero , wherein the binary zero includes both positive and negative values; and

a combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output.

6. (Currently Amended) ~~The adaptive slicer threshold generation system according to claim 5~~ An adaptive slicer threshold generation system, comprising:

a minimum detector to determine a minimum value of a binary one;

a peak detector to determine a maximum value of a binary zero; and

a combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output , wherein the adaptive slicer

threshold generation system further includes a gain element to set a value of a slicer threshold within a data eye.

7. (Currently Amended) ~~The adaptive slicer threshold generation system according to claim 5~~ An adaptive slicer threshold generation system, comprising:

a minimum detector to determine a minimum value of a binary one;

a peak detector to determine a maximum value of a binary zero; and

a combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output , wherein at least one of the minimum detector and the peak detector includes a leakage element to control an adaptation rate of ~~[[the]]~~ a slicer threshold.

8. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a minimum detector to determine a minimum value of a binary one, wherein the minimum detector includes

a minimum comparator to compare a received binary signal with a delayed output signal from a ~~second~~ first combiner; and

a delay element to delay an output signal from the ~~second~~ first combiner that is compared with the received binary signal by the minimum comparator, wherein

the ~~second~~ first combiner combines the output signal from the minimum comparator with a leakage signal from a ~~second~~ gain element, and

the ~~second~~ gain element manipulates the output signal from the ~~second~~ first combiner;
a peak detector to determine a maximum value of a binary zero; and
a second combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output.

9. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a minimum detector to determine a minimum value of a binary one;
a peak detector to determine a maximum value of a binary zero, wherein the peak detector includes a peak comparator to compare a received binary signal with a delayed output signal from a ~~second~~ first combiner, and a delay element to delay an output signal from the ~~second~~ first combiner that is compared with the received binary signal by the minimum comparator, the ~~second~~ first combiner combining an output signal from the peak comparator with a leakage signal from a ~~second~~ gain element, and the ~~second~~ gain element manipulating the output signal from the ~~second~~ first combiner;
and

a second combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output.

10. (Currently Amended) A receiver system, comprising:

a receiver circuit;
an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,
having

a first moving average filter to determine a first average value of a first
binary signal,

a second moving average filter to determine a second average value of a
second binary signal comprising only binary values of zero, wherein the second
binary signal includes both positive and negative values, and

a combiner to combine the first average value of the first binary signal and
the second average value of the second binary signal to generate a combined
output.

11. (Currently Amended) ~~The receiver system according to claim 10~~ A receiver
system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,

having

a first moving average filter to determine a first average value of a first
binary signal,

a second moving average filter to determine a second average value of a
second binary signal, and

a combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output, wherein the adaptive slicer threshold generation system further includes a gain element to set a value of a slicer threshold within a data eye.

12. (Currently Amended) ~~The receiver system according to claim 10~~ A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,

having

a first moving average filter to determine a first average value of a first binary signal,

a second moving average filter to determine a second average value of a second binary signal, and

a combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output, wherein at least one of the first moving average filter and the second moving average filter includes a leakage element to control an adaptation rate of ~~[[the]]~~ a slicer threshold.

13. (Currently Amended) A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and
an adaptive slicer threshold generation system coupled to the receiver circuit,
having

a first moving average filter to determine a first average value of a first binary signal,

a second moving average filter to determine a second average value of a second binary signal, wherein at least one of the first moving average filter and the second moving average filter includes a first delay element to delay a received binary signal, a ~~second~~ first combiner to combine the received binary signal, a delayed binary signal from the first delay element, and a delayed output signal from a second delay element, and a ~~second~~ gain element to manipulate an output signal from the ~~second~~ first combiner, the second delay element delaying the output signal that is combined by the ~~second~~ first combiner with the received binary signal and the delayed binary signal, and

a second combiner to combine the first average value of the first binary signal and the second average value of the second binary signal to generate a combined output.

14. (Currently Amended) A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,

having

a minimum detector to determine a minimum value of a binary one,
a peak detector to determine a maximum value of a binary zero, wherein
the binary zero includes both positive and negative values, and
a combiner to combine the minimum value of the binary one and the
maximum value of the binary zero to generate a combined output.

15. (Currently Amended) ~~The receiver system according to claim 14~~ A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,

having

a minimum detector to determine a minimum value of a binary one,

a peak detector to determine a maximum value of a binary zero, and

a combiner to combine the minimum value of the binary one and the

maximum value of the binary zero to generate a combined output, wherein the

adaptive slicer threshold generation system further includes a gain element to

set a value of a slicer threshold within a data eye.

16. (Currently Amended) ~~The receiver system according to claim 14~~ A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,
having
a minimum detector to determine a minimum value of a binary one,
a peak detector to determine a maximum value of a binary zero, and
a combiner to combine the minimum value of the binary one and the maximum value of
the binary zero to generate a combined output, wherein at least one of the minimum
detector and the peak detector includes a leakage element to control an adaptation rate
of ~~[[the]]~~ a slicer threshold.

17. (Currently Amended) A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,

having

a minimum detector to determine a minimum value of a binary one, the
minimum detector including a minimum comparator to compare a received binary
signal with a delayed output signal from a ~~second~~ first combiner, and a delay
element to delay an output signal from the ~~second~~ first combiner that is
compared with the received binary signal by the minimum comparator, the
~~second~~ first combiner, combining the output signal from the minimum
comparator with a leakage signal from a ~~second~~ gain element, and the ~~second~~
gain element manipulating the output signal from the ~~second~~ first combiner,
a peak detector to determine a maximum value of a binary zero, and

a second combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output.

18. (Currently Amended) A receiver system, comprising:

a receiver circuit;

an antenna coupled to the receiver circuit; and

an adaptive slicer threshold generation system coupled to the receiver circuit,

having

a minimum detector to determine a minimum value of a binary one,

a peak detector to determine a maximum value of a binary zero, wherein

the peak detector includes

a peak comparator to compare a received binary signal with a delayed output signal from a ~~second~~ first combiner; and

a delay element to delay an output signal from the ~~second~~ first combiner that is compared with the received binary signal by the peak comparator, wherein

the ~~second~~ first combiner combines an output signal from the peak comparator with a leakage signal from a ~~second~~ gain element, and the ~~second~~ gain element manipulates the output signal from the ~~second~~ first combiner, and

a second combiner to combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output.

19. (Currently Amended) A method of generating an adaptive slicer threshold, comprising:

determining a first average value by combining a first received binary signal and a first delayed binary signal;

determining a second average value by combining a second received binary signal and a second delayed binary signal, wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values;

combining the first average value and the second average value to generate a combined output; and

setting a value of a slicer threshold within a data eye.

20. (Previously Presented) A method of generating an adaptive slicer threshold, comprising:

determining a first average value by combining a first received binary signal and a first delayed binary signal, wherein the first average value is further determined by combining a first leakage signal with the first received binary signal and the first delayed binary signal;

determining a second average value by combining a second received binary signal and a second delayed binary signal;

combining the first average value and the second average value to generate a combined output; and

setting a value of a slicer threshold within a data eye.

21. (Previously Presented) A method of generating an adaptive slicer threshold, comprising:

determining a first average value by combining a first received binary signal and a first delayed binary signal;

determining a second average value by combining a second received binary signal and a second delayed binary signal, wherein the second average value is further determined by combining a second leakage signal with the second received binary signal and the second delayed binary signal;

combining the first average value and the second average value to generate a combined output; and

setting a value of a slicer threshold within a data eye.

22. (Currently Amended) A method of generating an adaptive slicer threshold, comprising:

determining a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal;

determining a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values;

combining the minimum value of the binary one and the maximum value of the binary zero to generate a combined output; and

setting a value of a slicer threshold within a data eye.

23. (Previously Presented) A method of generating an adaptive slicer threshold, comprising:

determining a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, wherein the minimum value of the binary one is further determined by combining a first leakage signal with a first output signal;

determining a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal;

combining the minimum value of the binary one and the maximum value of the binary zero to generate a combined output; and

setting a value of a slicer threshold within a data eye.

24. (Previously Presented) A method of generating an adaptive slicer threshold, comprising:

determining a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal;

determining a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the maximum value of the binary zero is further determined by combining a second leakage signal with a second output signal;

combining the minimum value of the binary one and the maximum value of the binary zero to generate a combined output; and

setting a value of a slicer threshold within a data eye.

25. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

determine a first average value by combining a first received binary signal and a first delayed binary signal,

determine a second average value by combining a second received binary signal and a second delayed binary signal , wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values,

combine the first average value and the second average value to generate a combined output, and

set a value of a slicer threshold within a data eye.

26. (Previously Presented) An adaptive slicer threshold generation system, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

determine a first average value by combining a first received binary signal and a first delayed binary signal, wherein the machine-readable program code further includes

instructions to combine a first leakage signal with the first received binary signal and the first delayed binary signal to determine the first average value,

determine a second average value by combining a second received binary signal and a second delayed binary signal,

combine the first average value and the second average value to generate a combined output, and

set a value of a slicer threshold within a data eye.

27. (Previously Presented) An adaptive slicer threshold generation system, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

determine a first average value by combining a first received binary signal and a first delayed binary signal,

determine a second average value by combining a second received binary signal and a second delayed binary signal, wherein the machine-readable program code further includes instructions to combine a second leakage signal with the second received binary signal and the second delayed binary signal to determine the second average value,

combine the first average value and the second average value to generate a combined output, and

set a value of a slicer threshold within a data eye.

28. (Currently Amended) An adaptive slicer threshold generation system, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

determine a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal,

determine a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the second received binary signal comprises only binary values of zero and includes both positive and negative values,

combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output, and

set a value of a slicer threshold within a data eye.

29. (Previously Presented) An adaptive slicer threshold generation system, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

determine a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal, wherein the machine-readable program code

further includes instructions to combine a first leakage signal with a first output signal to determine the minimum value of the binary one,

determine a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal,

combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output, and

set a value of a slicer threshold within a data eye.

30. (Previously Presented) An adaptive slicer threshold generation system, comprising:

a machine-readable storage medium; and

machine-readable program code, stored on the machine-readable storage medium, the machine-readable program code having instructions to

determine a minimum value of a binary one by comparing a first received binary signal with a first delayed output signal,

determine a maximum value of a binary zero by comparing a second received binary signal with a second delayed output signal, wherein the machine-readable program code further includes instructions to combine a second leakage signal with a second output signal to determine the maximum value of the binary zero,

combine the minimum value of the binary one and the maximum value of the binary zero to generate a combined output, and

set a value of a slicer threshold within a data eye.